

## ABSTRACT

A synchronization control device and a synchronization control method are provided in which it includes controllers  $A_m$  and  $A_{s1}$  of a master section and a slave section for accurately synchronizing rotational frequency and rotation phases of driving electric motors  $M_m$  and  $M_{s1}$ . The controller  $A_{s1}$  includes rotational frequency detectors  $S_{s1}$ ,  $F_{s1}$ , a master phase counter  $C_{m1}$ , and a slave phase counter  $C_{s1}$ , and detects at all times both of a rotational frequency and a rotation phase of the electric motors  $M_m$  of the master based upon an output of the rotary encoder  $P_m$ , and further detects at all times both of a rotational frequency and a rotation phase of the electric motor  $M_{s1}$  of the slave. A phase deviation calculator  $H_{s1}$  is provided to calculate synchronization phase deviation at all times, and when a switch  $RY_{s1}$  is actuated, it corrects an output of the rotational frequency detection means  $S_{s1}$  based upon the phase deviation and matches origins of the electric motors of the master section and the slave section to shift the operation to synchronization control.